



## 420 Instruction Manual – 2008 Edition



### Introduction

The boat comes with all gear ready to sail, however there is a certain amount of assembly which we hope we can cover in this instruction manual and through the tuning guide, that will make it much quicker to assemble and get your S/C 420 on the water ready for sailing or racing.

All the parts come in the boats except the masts, which will be located in the container together. So after you find the mast you must then open up your boat and assemble in any order that suits your requirements. In the below information and also with the assistance of the tuning guide, you should be able to correctly set up each specific part of the boat.

### Mast

The mast comes with the adjustable spreaders and you will need to bolt these on (nuts and bolts provided), also put the shroud in the spreader end using a screwdriver (position the shroud wire behind the bolt). Fasten the shroud and the trapeze lines in with the T terminals before attaching the shroud to the spreader end. You will also need to feed the ropes into the mast via the mouse line supplied, the best way to do this is to tape the two ropes together securely prior to pulling the new line through. The spreader adjusters work very well and 1 full turn is equal to 5mm of pre bend. To set these up originally I recommend pulling on a reasonable amount of tension, then step back 15 metres + and line up the shroud wire just above the shroud adjuster and then compare the shroud/spreader position. Make these even first before attempting to tune the rig, also I advise having more bend than required originally and then reducing it once you are close to the tuning numbers on the rig tension and mast rake.



### Rigging Pack

Below is a picture of the rigging pack supplied by Seldon. You will find in it the Topper and Topper Hook, the Main Halyard, the Spinnaker Halyard, the Trapeze Wires, the Forestay and Forestay Halyard, the Shrouds, the Rig Tension Strop, the False Forestay and lastly the Inner Forestay (to this the Forestay Spinner, is required to be added by putting on above the swage and inserting the bolt, so it can't come back off).



### Boom

One boom is supplied as shown below, all gear should be on or in the boom. Set the vang slide to 625mm to the centre of the slide from the back of the mast track. Set the front main sheet slide to 1385mm to the centre of the slide from the back of the mast track, also have the second mainsheet slide set just behind the first one at the 1385mm point.



### Pole

One pole is supplied with the ends facing up. From the rope bag tie the pole rope on as the picture below shows, so the rope hangs below the pole when being used.



### Bow Attachments

Have the bow attachments, shackled as shown. Then tie on the false forestay elastic and the jib tack rope, then tie the jib tack down as required.



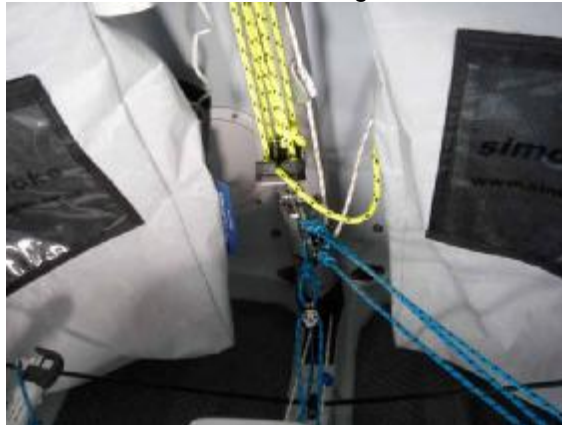
### Forestay Spinner and Jib Head

Shackle onto the forestay spinner and then use the rope for the jib head tie, to get the optimal position for your jib every time you go sailing. You can use the long shackle or the short shackle, plus also use the supplied tie if required. The position of the jib head should be approx 20mm from the bottom surface of the spinner. Below is a picture using the long shackle (which we recommend with no tie).



### **Mast Base**

The mast step bolt should be in the 6<sup>th</sup> hole from the back. The rig tension bolt should be in the 3<sup>rd</sup> hole from the back.



### **Spreader Length and Marks**

The spreader length should be 505mm from side of mast to centre of shroud wire, this is the 5<sup>th</sup> pin hole position. Mark the spreaders every two cm's from the centre of the shroud wire, this can be used for the jib trim with regard to the leech settings.



### **Trapeze System**

The trapeze ropes and blocks are pre assembled, in the fitting bag. Once you get them out, shackle them on the trapeze wires and hook them onto the trapeze elastic loops as shown, by feeding the elastic bowline through the hole and over the edge of the ring.



**Rope Bag**

In the rope bag is a list of all the ropes on the boat. This list shows which ropes are already on the boat and also which ropes come in the bag. Also listed is the size and length of each rope. All the ropes in the bag come with a label attached, so you can quickly assemble them as required.



**Fitting Bag**

In the fitting bag are all the fittings that are not fixed on the yacht or loose with a system that must be put on after you receive the boat. We have also provided a list of all the fittings to assist assembly onto the boat. These should all be relatively straightforward to position them on the boat in the correct systems.



**Jib Sheet Marks**

On the boat we have provided marks for the jib sheets. For tuning information see tuning guide.



### Vang

Have the rope strops and vang blocks attached as shown above to the mast collar. The other end should be attached as the below illustration shows. There are 3 vang ropes in the rope bag, a 2.5m which is used from through the cleat and hull at each end and has a single Harken sheave on it. The 2<sup>nd</sup> vang rope which is 2m long and this goes from the single block through the single block with a becket up to another single block and then back down to the becket. The 3<sup>rd</sup> vang rope is tied off onto the shackle attached to the vang and mast strap in a bowline, then goes up through the single Harken air block (which is shackled to a clip that attaches onto the vang slide on the boom) then back down to the single Harken block. Also see the mast base picture to get a good understanding of the mast end of the vang system.



### Spinnaker Sheets and Spinnaker Knots

The spinnaker sheet rope is a special type of 6mm rope. This enables you to use it in a 6mm form or taper it down if you like after the spinnaker sheet cleats position into a smaller lighter diameter of rope. We advise clients to put in spinnaker sheet knots before the spinnaker sheet blocks on the side deck. These should be positioned so the spinnaker can be bagged in either of your preferred bags with adequate room on the sheet, but not so much that the spinnaker can blow out and twist or capsize the boat at an undesirable time. A stopper knot is okay for this. You can also loop it through itself if it is easier and if you prefer to change these on the water with more ease. You will find these fittings in the fitting bag.

### Mainsheet

Assemble the mainsheet as the picture below shows. The boom fittings will be found in the fitting bag.



### Plastic Rope Balls

These two rope balls should be used on the pole downhaul system in front of the knot (see picture under mast base) and also on the spinnaker halyard before the knot (see picture below). The balls will be found in the fitting bag.



### Pole Hook

The picture above shows how to tie on the pole hook, a bowline through the ring and two half hitches below around the hook arm. Also if your pole is coming out of these hooks too easily, close the ring up at the opening with a pair of vice grips or similar.

### Chocks and Reverse Chocking Compass Bracket

We have supplied 5x 5mm (refer to tuning guide as 1/2) chocks and 5x 10mm (refer to tuning guide as 1) chocks, these can be used to chock the mast and lock it into place fore and aft whilst sailing. This clearly has a big advantage on other systems and as the mast can be chocked forward in the very light and reaching and strong winds, no vang can be used for reaching without inverting the mast. This equates to higher speeds and better angles to be sailed across reaches, with less overpowering of the boat.



### Centre Case Systems

Below is a picture of the centre case systems and traveler bar.



### Centreboard Uphaul and Downhaul System

Tie on the centerboard tie as shown, this should be able to be taken off with ease by slipping the bowline over the two balls on the centerboard. Also feed the centerboard uphaul directly through the centerboard and back down to the side blocks before going back to the side cleats as shown above.



### **Centreboard Fastening**

The centerboard comes with an alloy blue bush, this should be positioned in the CB pivot hole prior to inserting into the case. Insert the centerboard into case and then use the centre board bolt and washers to locate and bolt the foil through the centre case. You should use the two foam washers on the inside of the bolt to prevent water coming into the hull from the case whilst sailing.



### **Sponge and Bailer**

A sponge and bailer is provided as shown in the picture below, this can be useful in light airs when the auto bailer or venturi is not functional. You can store them in the spinnaker bags and you may wish to have the bailer tied into the boat.



### **Tension Gauge**

We have provided a complimentary Loo's Spring Gauge as below with the boat. We use this on the shroud when rigging and tuning the boat.



### Wind Indicator

We have provided a complimentary High Performance New Zealand made wind indicator, this comes in it's own box and has instruction manuals of how to assemble. The wind indicator should be fastened to the top of the rig via duck tape or by drilling a hole through the top of the mast just big enough for the wind indicator to go into. Then drill another small hole through the side of the top of the mast bracket. Through this hole you should use whipping twine to attach the indicator to the mast.



### Shackles

In each boat in the fitting bag are the shackles used to assemble the boat. There are 5 big shackles, 2 small long D shackles and 3 small screw shackles.

Use one of the big shackles on the forestay at the fork end, one for the vang attachment onto the vang mast strap and one for connecting the vang snap hook onto the top of the vang system, which connects onto the boom. Another one should be used for the main halyard and the last one is to connect the rig tension stop to the Harken triple block with the cleat on it. The small long D shackle should be used on the false forestay to attach to the stem fitting as shown and also onto the spinner at the top, which connects onto the top of the jib. Two screw shackles should be used on the top of each trapeze rope cleat and the other can be used on the jib spinner if you want the head to be higher on the wire and the long D shackle does not permit this.

### Spare Mylar

We have also provided a complimentary double mylar pack in case you damage the set that is supplied with the boat. These are very easy to apply, just make sure that the surface is very clean and dry before applying any new mylar. If you use solvents to clean the surface, just make sure that all residue is removed before applying the mylar tapes. You will find the spare mylars in the fitting bag.





### Rudder Stock

One rudder stock is supplied with the boat and can be taken on and off the boat by removing the top safety pin through the gudgeon pintle. The rudder stock also comes with a tiller extension that can be added or removed easily by snapping together the two parts at the base of the tiller extension universal joint. For fastening the rudder into the stock there is a 6mm bolt with two wing nuts on each side and also a plastic pin for locking the rudder down. The bolt goes in the top locating hole and the plastic pin goes in the lower hole.



### Covers

The boat comes with a bottom cover and top cover for the hull and the centerboard and rudder will be inside the foil covers. The top cover can be used with the mast rigged or with the mast down.



### Trolley

The trolley supplied will come with all fasteners plus one fastening key, it will be disassembled. For assembly instructions see the instructions supplied with the trolley. The assembled trolley should look like the picture below.



### **Sails**

One main, jib and spinnaker are supplied inside the boat and will be ready to sail including numbers and country code if known at the time of manufacture. For sail tuning information see tuning guide.



### **Tuning**

See tuning guide.

We hope this Instruction Manual was helpful to assemble and put together your S|C 420 Yacht. We also trust you will be very satisfied with the quality and design of your new boat which we hope brings you a lot of success on the race course.

Simon Cooke and The Team at S|C Yachts